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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,002	10/07/2003	Yu Xu	30011470 US-02	4555

7590

09/21/2005

Paul D. Greeley, Esq  
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.  
10th Floor  
One Landmark Square  
Stamford, CT 06901-2682

EXAMINER

SHAHER, RICKY D

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/680,002

Applicant(s)

XU, YU

Examiner

Ricky D. Shafer

Art Unit

2872

AM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/20/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election of species "A", a single notch filter and subspecies "1", depicted by Fig. 1, in the reply filed on 05/09/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claim 18 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/09/2005.

Applicant asserts that claims 1-17 and 19 read on the elected subspecies "1", depicted by Fig. 1. The examiner agrees that claims 2-7, 9-13 and 19 read on the elected species. However, the examiner disagrees that claims 8 and 14-17 read on the elected species for the reasons stated below.

The examiner is of the opinion that claim 8 is drawn to one of the other species, such as species "3", depicted by Fig. 4, due to the fact that the claim recites a light directing optical element arrangement which comprises a beam splitter and a reflecting element which is clearly not the case with elected species "1", which does not include a beam splitter.

The examiner is of the opinion that claims 14-17 are drawn to one of the other species, such as species "4", depicted by Fig. 5, due to the fact that the claims recite an additional layer of metal disposed upon another surface of the dielectric optical element so as to form an additional metal/dielectric interface, the another surface being substantially opposite the metal/dielectric interface which is clearly not the case with elected species "1", which clearly illustrates only one metal/dielectric interface.

Accordingly, claims 8 and 14-17 are additionally withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5, 7, 9-13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang ('907).

Wang discloses an optical notch filter apparatus (see Fig. 13B) for attenuating light of a predetermined wavelength, the apparatus comprising a dielectric optical element (1310a) having a layer of metal (1010a of Fig. 10) disposed upon a surface thereof so as to form a metal/dielectric interface (1320); a dielectric medium (1020a of Fig. 10) adjacent the layer of metal, the dielectric medium having a dielectric constant different from a dielectric constant of the dielectric optical element (see column 5, lines 51-63 and column 6, line 48 to column 7, line 8); wherein, when in use, light of a p-polarised state and a predetermined wavelength following a first propagation path (1352) so as to be incident upon the metal/dielectric interface is attenuated under conditions that support surface plasmon resonance (see column 2, line 17-42); at least one polarization modifying optical element (1330) arranged relative to the dielectric optical element

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so as, when in use, to translate the state of polarization of light of an s-polarised state to the p-polarised state, thereby permitting light at the predetermined wavelength having both the p- and the s-polarised states to be attenuated, a light-directing optical element arrangement (1310a, 1310b) to direct, when in use, light of the s-polarised state, or light once of the s-polarised state, along a second propagation path (1350), wherein the dielectric medium includes a plurality of dielectric layers (1020a,1020b,1020c) which may include a liquid crystal material (see column 10, lines 7-11) and a control unit (Vcontrol of Fig. 10) arranged to modify the at least one property of the dielectric layers (see column 10, lines 14-16). Note figures 1A, 2, 10 and 13B along with the associated description thereof.

6. Claims 1-6, 9 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Nikitin et al ('376).

Nikitin et al discloses an apparatus for attenuating light of a predetermined wavelength, the apparatus comprising a dielectric optical element (13,24) having a layer of metal (15) disposed upon a surface thereof so as to form a metal/dielectric interface; a dielectric medium (see column 7, lines 45-50) adjacent the layer of metal, the dielectric medium having a dielectric constant different from a dielectric constant of the dielectric optical element; wherein, when in use, light of a p-polarised state and a predetermined wavelength following a first propagation path so as to be incident upon the metal/dielectric interface is attenuated under conditions that support surface plasmon resonance; at least one polarization modifying optical element (22,23) arranged relative to the dielectric optical element so as, when in use, to translate the state of polarization of light of an s-polarised state to the p-polarised state, thereby permitting light at the predetermined wavelength having both the p- and the s-polarised states to be attenuated and a

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light-directing optical element arrangement (20) to direct, when in use, light of the s-polarised state, or light once of the s-polarised state, along a second propagation path. Note figures 3 and 4 along with the associated description thereof.

7. Claim 7 is objected to because of the following informalities: In claim 7, line 1, numeral "1" should be changed to --2--.

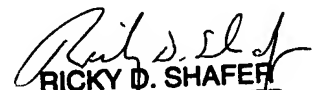
Appropriate correction is required.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

September 19, 2005

  
RICKY D. SHAFER  
PATENT EXAMINER  
ART UNIT ~~2503~~ 2872